

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	18313	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)). OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
L2	20	split\$4 same combiner same electrode same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat \$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L3	8	L1 and L2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L4	2308	split\$4 same combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat \$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L5	2056	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L6	2742	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L7	1	(L4 and L5 and L6) not L3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36

L8	4407	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L9	2	(L5 and L6 and L8) not (L3 L7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L10	1487017	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L11	12	L2 not (L9 L3 L7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L12	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
L13	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
L14	683	Franz-Keldysh	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L15	451	L10 and L14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L16	154	L1 and L15	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36

L17	1	L5 and L6 and L16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L18	19	(L9 L3 L7 L11 L12 L13) and (phase adj shift\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L19	715	Franz-Keldysh (franz adj keldysh)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L20	3	L18 and L19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L21	5009	("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) near20 (silicon near5 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L22	18313	((359/245,315,247,251- 252,254,108,237-238,278- 279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)). OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
L23	20	split\$4 same combiner same electrode same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat \$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L24	8	L22 and L23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L25	2308	split\$4 same combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave- guide (wave adj guide) (modulat \$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36

L26	2056	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L27	2742	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L28	1	(L25 and L26 and L27) not L24	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L29	4407	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat \$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L30	2	(L26 and L27 and L29) not (L24 L28)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L31	12	L23 not (L30 L24 L28)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L32	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
L33	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:36
L34	1	(L30 L24 L28 L31 L32 L33) and L21	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36

L35	825	("CW" continuous-wave (continuous adj wave)) near20 electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L36	1487017	("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L37	142	L35 and L36	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L38	27752	third adj electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L39	9	L37 and L38	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L40	2507	(electro-optic\$3 (electro adj optic \$3) electrooptic\$3) adj convert\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L41	163	L36 same L40	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L42	15	L22 and L41	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L43	6	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic \$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and (split\$4) and combiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36

L44	6	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) same electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L45	5	L44 not L43	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L46	22	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and split\$4 and combiner and electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L47	17	L46 not (L43 L42)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L48	5	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) and electrode) and (transmit\$5 adj station) and ((electro-optic\$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L49	6	(L48 L3 L7 L9 L11 L17 L18 L20 L34 L39 L42 L45 L47) and ((@ad>="20101005") (@pd>="20101005"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:36
L50	736579	"group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:45

L51	1	49 and 50	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:45
L52	2	("6744546").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/03/25 22:46
L53	0	50 and 52	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:46
L54	2178	("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) near20 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:47
L55	1819	("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:47

L56	1246	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:48
L57	5	56 and 5 and 6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:48
L58	3	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) same split\$4 same combiner) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:52
L59	67	((("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:53

		telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))				
L60	28	1 and 59	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:53
L61	0	(((((modulat\$5 adj (branch arm path)))) near5 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:55
L62	0	(((((modulat\$5 adj (branch arm path)))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1 and (bias\$3 adj (signal voltage))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:55
L63	0	(((((modulat\$5 adj (branch arm path)))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:56

		telluride) (thallium adj germanium adj telluride))) and split\$4 and combiner) and electrode\$1				
L64	0	(((((modulat\$5 adj (branch arm path)))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:56
L65	1426	((((( (branch arm path)))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:56
L66	20	((((((modulat\$5 ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide)))) near5 (branch arm path)))) near10 ("group IV semiconductor" (group-IV-semiconductor) (group adj IV adj semiconductor) ((carbon silicon germanium tin lead ununquadium) near5 semiconductor) (silicon adj (carbide germanium)) diamond (lead adj (selenide sulfide telluride)) (tin adj (sulfide telluride)) (lead adj tin adj telluride) (thallium adj tin adj telluride) (thallium adj germanium adj telluride)))) and electrode\$1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/03/25 22:58
S1	17794	((359/245,315,247,251-252,254,108,237-238,278-279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)). OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 08:07

S2	189	split\$4 same combiner same electrode same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat \$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:10
S3	18	split\$4 same combiner same electrode same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat \$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:10
S4	8	S1 and S3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:11
S5	2212	split\$4 same combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat \$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:16
S6	1937	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:17
S7	2607	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:17
S8	0	(S5 and S6 and S7 and S1) not S4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:17
S9	1	(S5 and S6 and S7) not S4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:17
S10	4239	combiner same ("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat \$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:18

S11	2	(S6 and S7 and S10) not (S4 S9)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:18
S12	1397207	("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:20
S13	121	(S6 and S7 and S12) not (S11 S4 S9)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:20
S14	40	S13 and S1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:20
S15	23106	combiner and split\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:20
S16	0	S14 and S15	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:21
S17	10	S3 not (S11 S4 S9)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:21
S18	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 08:28
S19	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 08:38

S20	658	Franz-Keldysh	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:40
S21	431	S12 and S20	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:40
S22	143	S1 and S21	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:40
S23	1	S6 and S7 and S22	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:41
S24	19	(S11 S4 S9 S17 S18 S19) and (phase adj shift\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:43
S25	689	Franz-Keldysh (franz adj keldysh)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:44
S26	3	S24 and S25	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 08:44
S27	4843	("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) near20 (silicon near5 substrate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:03
S28	17794	((359/245,315,247,251- 252,254,108,237-238,278- 279,290-292,298,300-302) or (385/1-3,40,129-132,5,8-9)). OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 14:04

S29	18	split\$4 same combiner same electrode same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat \$5 adj (branch arm path))) same bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S30	8	S28 and S29	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S31	2212	split\$4 same combiner same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat \$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S32	1937	(first adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S33	2607	(second adj electrode) near10 bias	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S34	1	(S31 and S32 and S33) not S30	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S35	4239	combiner same ("MZ interferometer" mach-zehnder mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide waveguide (wave adj guide) (modulat \$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S36	2	(S32 and S33 and S35) not (S30 S34)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S37	10	S29 not (S36 S30 S34)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04

S38	6	((("5524076") or ("5778113") or ("5991471")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 14:04
S39	2	("5267073").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/10/05 14:04
S40	1	(S36 S30 S34 S37 S38 S39) and S27	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:04
S41	795	("CW" continuous-wave (continuous adj wave)) near20 electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:07
S42	1397207	("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:08
S43	135	S41 and S42	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:08
S44	26546	third adj electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:08
S45	9	S43 and S44	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:08
S46	2452	(electro-optic\$3 (electro adj optic \$3) electrooptic\$3) adj convert\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:40

S47	157	S42 same S46	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:41
S48	1	(S36 S30 S34 S37 S38 S39) and S47	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:41
S49	14	S28 and S47	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:41
S50	143	S47 not (S49 S48)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:57
S51	157	("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic \$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:57
S52	0	("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic \$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4) same (split\$4) same combiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:58
S53	33	("MZ interferometer" mach- zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic \$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4) and (split\$4) andcombiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:58

S54	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic \$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) and (split\$4) and combiner	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 14:59
S55	6	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) same ((electro-optic \$3 (electro adj optic\$3) electrooptic\$3) adj convert\$4)) same electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:01
S56	5	S55 not S54	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:01
S57	20	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) and ((electro-optic\$3 (electro adj optic\$3) electrooptic \$3) adj convert\$4)) and split\$4 and combiner and electrode	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:03
S58	15	S57 not (S54 S49)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:04
S59	0	S28 and S58	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:05
S60	139	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) and electrode) and (transmit\$5 adj station)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:08
S61	23106	combiner and split\$5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:09

S62	8	S60 and S61	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:09
S63	5	((("MZ interferometer" mach-zender mach-zehnder (mach adj (zender zehnder)) "MZ" waveguide wave-guide (wave adj guide) (modulat\$5 adj (branch arm path))) and electrode) and (transmit\$5 adj station) and ((electro-optic\$3 (electro adj optic \$3) electrooptic\$3) adj convert\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/10/05 15:12

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